quent timepoints. By 24 hours, average RO for eptifibatide was 86%, whereas abciximab averaged only 67%. **Conclusion:** These data support the hypothesis that differences in clinical outcomes of large GPIIb-IIIa trials in patients with NSTE ACS may be related to the consistency and potency of antiplatelet effects.

1124-90 Platelet Activation as a Predictor of Acute Coronary Syndrome in Patients Who Present to the Emergency Department With Chest Pain

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Background: Platelet activation and coronary thrombosis are central to the pathophysiology of acute coronary syndromes, which only occasionally manifest with elevated enzymatic markers of myocardial necrosis. The ability to rapidly identify patients with increased platelet activation using a simple bedside test may allow for the early identification of those at highest risk for major or recurrent thrombotic events.
Methods: Platelet activation units (PAU) were measured using the Ultegra-Rapid Platelet Function Assay (Ultegra-RPFA), a simple, point-of-care assay in 201 patients presenting to the ED with the primary complaint of chest pain and either known coronary disease or multiple cardiovascular risk factors. In hospital MACE (death, MI, and urgent target vessel revascularization) and discharge diagnoses were recorded.
Results: Baseline platelet function ranged from 44 to 315 PAU (median 171). In patients with PAU below the sample median, corresponding to greater platelet activation, the likelihood of an in-hospital troponin positive MI was 1.8 times that of patients with lower platelet activation (24.7% versus 13.5%, p=0.04 by chi-square). Six month outcomes data continue to be collected.
Conclusion: In patients presenting to the ED with chest pain, low PAU is associated with higher risk of developing in-hospital myocardial infarction. Low PAU is representative of greater platelet activation and is rapidly determined by the Ultegra-RPFA. Its association with long-term risk, correlation with other established risk factors, and variability over time are under investigation.

1124-91 Glycoprotein IIb/IIIa Receptor Antagonism in Patients With Acute Coronary Syndromes and Prior Coronary Artery Bypass Grafting: Results From PRISM PLUS

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Background: Prior coronary artery bypass grafting (CABG) is a predictor of recurrent ischemic events in patients presenting with acute coronary syndromes (ACS). The relative efficacy of glycoprotein IIb/IIIa platelet receptor antagonists in this patient group remains undefined. The aim of this study was to assess the role of tirofiban in patients with non-ST elevation ACS and prior CABG.
Methods: Of 1,570 patients treated with either tirofiban plus heparin (T+H, n=773) or heparin alone (H, n=797), 231 (16% and 13% in each treatment group, respectively) had prior CABG. Treatment outcomes of patients with and without prior CABG were compared with respect to the composite endpoint of death, myocardial infarction (MI), or refractory ischemia (RI).
Results: Compared to patients without prior CABG, those patients with prior CABG were more likely to have risk factors for a complicated ACS course, including advanced age, multivessel coronary artery disease, heart failure, and prior aspirin use (all p<0.0001). The frequency of diabetes among patients with and without prior CABG did not differ significantly. After adjusting for potential confounders, compared to those patients without prior CABG, those patients with prior CABG were much more likely to suffer adverse ACS outcomes (death, MI or RI) across all time points examined (p< 0.0001). Among patients with prior CABG, reductions in the composite endpoint were generally similar with T+H versus H alone at 48 hours, 7, 30, and 180 days (6.5% vs 14.0%, p=0.09; 16.9% vs 29.0%, p=0.035; 25.0% vs 40.2%, p=0.015; 37.1% vs 48.6%, p=0.057). The benefit of treatment with T+H among patients without prior CABG was statistically significant at the 7 day composite endpoint only (12.2% vs 16.2%, p=0.027). Rates of percutaneous coronary intervention were similar between patients with and without prior CABG (28.6% vs 32.5%, p=NS), and no difference existed with respect to major bleeding rates between the groups (0.9% vs 1.1%, p=NS).
Conclusions: Patients with prior CABG represent a population at high risk for ischemic complications of ACS. Tirofiban was well tolerated and effective in reducing the considerable risk for ischemic ACS complications in patients with prior CABG.

1124-92 Preintervention Restoration of Coronary Flow in Patients With ST Elevation Acute Myocardial Infarction Is Associated With Better Angiography and Clinical Outcomes

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Background: In patients undergoing primary angioplasty (PCI) for ST elevation myocardial infarction (STEMI) without routine use of stents or IIb/IIIa antagonists, pre-intervention restoration of coronary flow in the infarct related artery (IRA) is associated with higher PCI success and subsequently improved outcome. Ratification of these findings in patients treated with contemporary strategies of primary PCI may influence pre-interventional management.
Methods: The significance of pre-intervention IRA patency was studied in 173 consecutive patients with STEMI who underwent primary PCI with routine stent deployment and administration of IIb/IIIa antagonist unless contraindicated. Prior to the intervention, patients were treated with chewable aspirin (160-325mg) and heparin (70u/kg as a bolus followed by 1000 u/hr).
Results: Fifty-five patients (31.8%) had TIMI flow II-III in the IRA (Group A) and 118 (68.2%) had TIMI flow 0-I (Group B), on initial angiogram. There were no significant differences in the baseline demographic characteristics, distribution of the IRA and extent of coronary artery disease between Groups A and B. Despite equally high usage of IIb/IIIa antagonists (72% vs 82.5%, p = 0.66) and stents (94% vs 88%, p=0.8), Group A versus Group B patients had higher PCI success rate (96.3% vs 84.6%, p = 0.02) mainly due to a three-fold higher incidence of achieving TIMI flow <III, despite widely dilated epicardial IRA. Group A versus Group B had a lower incidence of shock or CHF (24% vs 8% p=0.011), malignant ventricular arrhythmias (17% vs 2.3%, p=0.1), mortality (5.9% vs 1.8%, p=0.44) and need for IABP, ventilation and/or temporary pacemaker (24% vs 9% p=0.023).
Early benefit in survival without CHF in Group A patients was sustained throughout long-term follow-up (30±10 months), as demonstrated by the Kaplan-Meire analysis (p=0.05).
Conclusions: Even in the era of routine use of intra-coronary stent and IIb/IIIa antagonists, pre-intervention restoration of coronary flow in the IRA is associated with improved primary PCI results.
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1124-93 Relation of Prothrombotic Platelet Polymorphisms to the First Manifestation of Coronary Artery Disease in Middle-Aged Males

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Background: Sudden death is often the first manifestation of the underlying disease, being by far the leading first symptom of CAD in early middle age. 90% of CAD mortality in individuals under 55 occurs out-of-hospital and is in most cases due to MI as the primary manifestation of CAD. Family history of premature CAD is a strong indicator of MI risk in early middle age. Platelet GPIb-IX-V receptors are activated after plaque rupture and bind to subendothelial collagen via vWF. This is followed by direct binding of platelet GPIa/IIa and GPVI collagen receptors to collagen followed by aggregation of platelets due to the activation of GPIIb/IIIa fibrinogen receptors.
Methods and Results: We performed a primary study on the frequencies of several polymorphisms located in the genes encoding these 4 platelet glycoproteins in a setting of different primary manifestations of coronary artery disease: 1) men with fatal acute MI (n=40), 2) hospitalised men with acute MI, of which 84% STE-MI (n=110) and 3) men with stable CAD without the history or evidence of unstable CAD/MI (n=50). The PIA2 allele of GPIIIa polymorphism was more often (32%) carried by men with fatal acute MI as opposed to men with stable CAD (21%) (OR 1.8). This was especially evident in men under 60 yrs (OR 4.1) (45% vs. 17%). Hospitalised survivors of STE-MI were more often carriers of the PIA2 allele of GPIIIa (26%) as well as the C allele of the GPIb Kozak polymorphism (32%) compared to men with stable CAD (21% and 18% respectively) (respective ORs 1.5 and 2.2). These differences between STE-MI and stable CAD were especially clear in men under 60 yrs (27% vs. 17%, OR 2.0 for GPIIIa; 36% vs. 20%, OR 2.4 for Kozak). None of the platelet polymorphisms was more frequent among men with fatal as opposed to non-fatal MI. Conclusions: We conclude that the PIA2 allele of GPIIIa fibrinogen receptor and Kozak C allele of GPIb vWF receptor are associated with an increased risk of unstable first manifestation of coronary disease in early middle age. The risk associated with the PIA2 allele was evident for both fatal and non-fatal MI compared to the Kozak C allele which seemed to be associated with an increased likelihood of non-fatal MI only.

1124-94 Predictors of IIb/IIIa Platelet Antagonist Use in an Unselected Registry of Acute Coronary Syndrome Patients

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Background: IIb/IIIa platelet blocking agents are used frequently for the treatment of patients with acute coronary syndromes (ACS), often during angiography. We sought to determine the frequency of IIb/IIIa use and factors associated with its use in the Emergency Department (ED) and/or hospital prior to coronary intervention.
Methods: The Registry of Acute Coronary Syndromes (TRACS) is a database comprised of 9 institutions that was established to track the quality of care of ACS. Three thousand four hundred and sixty four patients were registered, 1,680 of whom were admitted.
Results: Of the admitted patients, 36% were treated with a IIb/IIIa platelet blocker but only 15% of these before coronary intervention. Patients treated pre-intervention were more likely male (67% vs 55%, p <.001) and were younger (66 vs 71 y, p <. 01) compared to untreated patients. There were no difference in the frequency of troponin elevations between the two groups (36% vs 35%) nor, differences in conventional coronary artery disease risk factors. However, patients who were treated early received aspirin (53% vs 45%, p=.001), beta blockers (31% vs 19%, p= .001), and coronary interventions (67% vs 13%, p<.001) more frequently. Only 4.5% of patients receiving a IIb/IIIa platelet blocker died compared to 9.1% who did not (p<.003).
Conclusion: IIb/IIIa platelet blockers are used in the ED and hospital prior to intervention in a minority of cases even in patients with elevated troponins. However, early IIb/IIIa use is associated with lower mortality. These data suggest the need for re-evaluation of how IIb/IIIa platelet blockers are utilized.